

Weights of some Venezuelan birds

by Betsy Trent Thomas

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In spite of recent advances in our knowledge of the avifauna of the northern neotropics, much basic information, such as body weights, remains unavailable for many species. I give here 738 body weights of 141 species of Venezuelan birds. Other papers with weights of birds from northern South America are from Colombia (Miller 1947, Burton 1973, 1975, Russell *et al.* 1979), Venezuela (Collins 1972), Trinidad (Snow & Snow 1963, French 1973) and Suriname (Haverschmidt 1948, 1952, 1968).

From 1976 to 1981, during the course of several field studies, I obtained most of the weights presented here from birds mist-netted on a cattle ranch in the Venezuelan llanos, Estado Guárico (elev. 63 m); a detailed treatment of the avifauna of this area is presented elsewhere (Thomas 1979). Smaller samples of birds were netted at 2 sites in Estado Miranda, Los Anaucos (elev. 550 m) and Fila Mitana (elev. 1090 m), and in Estado Aragua at Rancho Grande in Henri Pittier National Park (elev. 1100 m). The Estado Miranda sites are in the coastal range of mountains about 30 km south of Caracas, while the Estado Aragua site is in the same mountains but 90 km to the west.

The birds were weighed on Pesola spring balances of 10, 50, 100, 300 and 1000 gramme capacity, usually within 15 minutes of capture. Weights less than 100 grammes were recorded to the nearest tenth of a gramme; from 100 to 300 grammes to the nearest gramme and above that to the nearest 5 grammes. Nearly all netting was done between 7 a.m. and 12 noon and no weights are given of known juvenile birds. When I examined the birds, I also recorded, for most species, their soft part colours, usually the bill, gape, iris, legs and feet, using the Naturalist's Color Guide (Smith 1975) in the hand. These colour notes are available for specific birds on request from the author. The sequence of species for the weight data follows Meyer de Schauensee & Phelps (1978). When samples exceed 7, the number, range, mean and standard deviations are given.

Clark (1979), in his review, reported that bird weights vary due to a variety of conditions, but that some evidence suggests that tropical resident species' weights vary little seasonally. In Trinidad, Snow & Snow (1963)

TABLE I
Weights of some recaptured ringed birds in Venezuela

	Capture date	Weight (gm)		Capture date	Weight (gm)
<i>Phacellodomus rufifrons</i>			<i>Conopias inornata</i>		
O-O (LA)	18 Jul 1977	25.8	1G-31G	29 Apr 1977	29.5
	6 Jul 1978	26.3		9 Apr 1980	29.0
	4 Mar 1981	26.6			
W-W (LA)	31 Aug 1977	27.8	RG-16RG	10 May 1979	27.6
	27 Dec 1977	26.3		16 Mar 1981	28.0
dB-dB	26 Jun 1979	25.8	YdB-Y31	13 Apr 1980	29.0
	24 Apr 1981	27.0		15 Mar 1981	31.0
<i>Tachyphonus rufus</i>			<i>Arremonops conirostris</i>		
odB-odB (LA)	27 Dec 1977	32.1	dB-dB (LA)	4 Mar 1981	29.8
	3 Dec 1978	31.5		27 Oct 1981	31.5

found only small seasonal variation in bird weights and that the same individuals' weights remained fairly constant; my observations agree with both points. Although my data are few, the occasional recapture of birds ringed as adults suggests that individuals' weights vary little either with season or age (Table 1). The species of birds in Table 1 are not migratory and they live exclusively on the same territories throughout the year.

TABLE 2
A comparison of bird weights between some northern neotropical areas

	Suriname (Haverschmidt)	Trinidad (French)	Trinidad (Snow & Snow)	Venezuela (this paper) ¹	Venezuela (Collins)
<i>Columbina</i> <i>talpacoti</i> ²	45.5 ± 4.65 ³ (41–52) N=4	=	♂♂48.1 ± 3.5 (40.5–56.5) N=38 ♀♀44.8 ± 3.3 (35.5–51.5) N=36	45.55 ± 3.73 (41.5–53) N=18	=
<i>Leptotila</i> <i>verreauxii</i> ⁴	113.66 ± 12.09 (99–129) N=6	143.8 (123–168) N=12	=	150.97 ± 10.12 (134–169.5) N=14	=
<i>Pitangus</i> <i>sulphuratus</i> ⁵	53.25 ± 4.35 (49–57) N=4	59.55 (53–67) N=14	61.0 ± 4.45 (57–67) N=5	60.96 ± 4.07 (53.5–67.5) N=15	=
<i>Notiochelidon</i> <i>cyanoleuca</i>	=	=	=	9.7 ± 0.59 (8.5–10.8) N=21	10.48 ± 0.47 (9.5–11.3) N=15
<i>Turdus</i> <i>nudigenis</i>	63.5 ± 5.32 (58–69) N=4	=	♂♂61.6 ± 4.6 (55–74.5) N=25 ♀♀65.6 (56.5–74) N=9 unsexed 64.7 (57.5–72) N=54	58.47 ± 3.81 (53–66) N=21	=
<i>Coereba</i> <i>flaveola</i>	=	=	♂♂10.5 ± 0.69 (9–12) N=34 ♀♀9.9 ± 0.64 (9–11) N=24	9.16 ± 0.61 (7.9–10.5) N=16	=
<i>Traupis</i> <i>episcopus</i> ⁶	33.5 ± 4.36 (28–37) N=4	=	37.1 (31–42.5) N=28	32.6 ± 2.1 (29.5–36.5) N=12	34.75 ± 2.35 (32–38.5) N=5
<i>Saltator</i> <i>coerulescens</i>	49.75 ± 3.09 (47–54) N=4	=	52.0 ± 1.73 (48.5–54) N=8	54.69 ± 4.73 (49–67) N=24	=

¹ All data combined.

² Weights given in grammes with standard deviations, range in parentheses.

³ *Talpacoti talpacoti talpacoti* in Suriname; *T. t. rufipennis* in Trinidad and Venezuela.

⁴ *Leptotila verreauxii brasiliensis* in Suriname; *L. v. verreauxii* in Trinidad and Venezuela.

⁵ *Pitangus sulphuratus sulphuratus* in Suriname; *P. s. trinitatis* in Trinidad; *P. s. rufipennis* in Venezuela.

⁶ *Traupis episcopus episcopus* in Suriname; *T. e. nesophila* in Trinidad; *T. e. cana* in Venezuela.

Table 2 gives weights for a few birds where comparable data exists, although the sample sizes generally are small. With the exception of *Turdus nudigenis* the birds from Suriname appear to be smaller than those from Trinidad and Venezuela; the extremes are the 2 continental forms of *Leptotila verreauxii brasiliensis* in Suriname, when compared with *L. v. verreauxii* of Venezuela. However, the most significant point is our paucity of data, which clearly indicates that much more work must be done in the neotropics before such trends can be verified.

The following weights are of birds from the Venezuelan llanos unless otherwise identified; others are from Los Anaucos (LA), Fila Mitana (FM) and Rancho Grande (RG). All weights in grammes.

*North American migrant **Austral migrant

- Butorides striatus*: unsexed 172.0
Gampsonyx swainsonii: unsexed 80.5
Elanoides forficatus: (LA) ♀ 445.0
Buteo magnirostris: (LA) unsexed 224.0
Jacana jacana: unsexed 108.5
**Tringa solitaria*: unsexed 43.8 October
Columbina minuta: ♂♂ 33.5, 36.9, ♀♀ 31.3, 32.6; unsexed 28.7, 29.5, 32.5
Columbina talpacoti: 13 unsexed 41.5 - 53.0 (45.08 ± 3.38); (LA) unsexed 41.5, 44.0, 45.0, 50.3, 53.0
Scardafella squammata: 18 unsexed 48.0 - 60.0 (54.16 ± 3.84); (LA) unsexed 51.5, 53.8
Leptotila verreauxi: 11 unsexed 134.0 - 169.5 (151.50 ± 11.05); (LA) unsexed 141.0, 152.5, 153.6
Aratinga pertinax: unsexed 76.8
Forpus passerinus: 8 ♂♂ 24.3 - 28.3 (25.86 ± 1.35), ♀♀ 21.5, 23.3, 24.5, 25.0, 26.0
**Coccyzus americanus*: unsexed 58.0 April
Piaya cayana: unsexed 84.0, 92.0, 97.5, 110.8
Crotophaga major: ♂ 175.0
Crotophaga sulcirostris: 8 unsexed 47.8 - 69.0 (58.61 ± 7.47)
Nyctidromus albicollis: ♂ 56.0
Phaethornis augusti: (LA) unsexed 5.0, 5.4, 5.4, 5.8; (RG) unsexed 5.1
Phaethornis longuemareus: (FM) unsexed 2.6
Colibri thalassinus: (FM) unsexed 5.1
Chrysolampis mosquitos: ♂ 3.5
Chlorostilbon mellisugus: (LA) unsexed 2.3
Amazilia fimbriata: unsexed 4.5, 4.7, 4.9, 4.9, 5.3, 5.4, 5.5; (LA) 8 unsexed 3.5 - 6.2 (4.97 ± 0.79)
Amazilia tobaci: (LA) 3.7, 3.7, 4.0, 4.2, 4.5
Chalybura buffonii: (LA) ♂♂ 7.0, 7.2, ♀ 6.3
Heliodoxa leadbeateri: (FM) ♂ 7.1
Sternoclyta cyanopectus: (FM) ♂ 8.7
Coeligena coeligena: (RG) unsexed 8.2
Aglaiaocercus kingi: (RG) ♂ 5.2
Chloroceryle americana: ♂ 26.0
Chloroceryle aenea: ♂♂ 13.0, 13.5, 13.5, 13.8, 15.0, 15.1, ♀♀ 14.0, 15.0, 15.8, 16.0, 16.8, 16.9
Galbulia ruficauda: ♂♂ 24.5, 25.5, 25.8, ♀♀ 25.5, 27.8; (LA) ♂♂ 22.6, 22.9, ♀♀ 21.1, 22.6
Hypnelus ruficollis: 11 unsexed 43.3 - 57.0 (49.82 ± 4.04)
Picumnus squamulatus: (LA) ♂♂ 10.4, 10.6, 10.7, 10.8, 11.0, ♀ 9.9
Chrysotilus punctigula: ♂ 67.0, 70.0
Melanerpes rubricapillus: ♀♀ 43.5, 46.2, 50.7, unsexed 41.5, 43.5
Dendrocincta fuliginosa: (FM) unsexed 34.5
Xiphorhynchus picus: 14 unsexed 35.3 - 46.8 (41.62 ± 3.16)
Xiphorhynchus guttatus: (LA) unsexed 38.1
Campylorhamphus trochilirostris: unsexed 40.5, 41.0, 44.0; (LA) unsexed 39.0
Synallaxis albescens: unsexed 11.9, 14.3; (LA) unsexed 12.0, 13.8, 14.5
Synallaxis cinnamomea: (LA) unsexed 16.6
Certhiaxis cinnamomea: unsexed 14.5
Phacellodomus rufifrons: 22 unsexed 21.5 - 27.0 (24.50 ± 1.42); (LA) 14 unsexed 23.8 - 27.8 (24.70 ± 1.02)
Taraba major: (LA) ♂ 57.5
Sakesphorus canadensis: ♀ 20.0
Thamnophilus doliatus: (LA) ♂♂ 23.6, 25.5, 25.6, 26.3
Formicivora grisea: ♂ 11.5; (LA) ♂♂ 9.0, 9.5, 9.9, 10.4
Myrmeciza longipes: (LA) ♂ 27.0, ♀ 25.1
Grallaricula ferrugineipectus: (LA) ♂ 15.0
Chiroxiphia lanceolata: ♂ 15.1, ♀ 14.1; (LA) ♀♀ 17.8, 18.6
Fluvicola pica: ♂ 14.3, ♀ 11.9
Pyrocephalus rubinus: ♀ 13.8
Machetornis rixosus: unsexed 28.3, 31.3
Tyrannus melancholicus: unsexed 33.5, 34.5, 35.0, 38.8, 40.5, 41.5
Megarhynchus pitangua: unsexed 68.5
Myiozetetes cayanensis: 14 unsexed 22.0 - 29.5 (25.88 ± 2.1)
Myiozetetes similis: 17 unsexed 22.0 - 28.5 (24.37 ± 1.62)
Conopias inornatus [= *Myiozetetes*]: 35 unsexed 26.8 - 33.5 (29.42 ± 1.71)
Pitangus sulphuratus: 15 unsexed 53.5 - 67.5 (60.96 ± 4.07)

- Pitangus lictor*: unsexed 23.5
Myiarchus ferox: unsexed 24.3, 25.6, 25.8
Myiarchus tyrannulus: 9 unsexed 25.0-30.0 (28.25 ± 1.72)
Cnemotriccus fuscatus: (LA) unsexed 11.5, 11.6, 13.2
Myiophobus fasciatus: (LA) unsexed 8.0, 8.3, 8.9, 9.1, 9.9
Tolmomyias sulphurescens: unsexed 15.0
Tolmomyias flaviventris: 11 unsexed 10.5-12.8 ($11.79 \pm .06$)
Todirostrum cinereum: ♂♂ 6.4, 6.5, 6.7, 6.8, 7.3, ♀♀ 6.5, 6.5, 7.2
Todirostrum sylvia: unsexed 8.5
Atalotriccus pilaris: (LA) unsexed 5.4, 7.5, 7.7, 9.1
Capsiempis flaveola: (LA) unsexed 7.9
Euscarthmus meloryphus: (LA) unsexed 7.0, 7.5
Inezia subflava: 14 unsexed 7.5-10.2 ($8.38 \pm .63$)
Elaenia flavogaster: unsexed 23.8, 24.1, 25.0; (LA) unsexed 21.0, 21.5, 22.3
***Elaenia parvirostris*: unsexed 13.3, 13.8, 13.9, 14.8, 16.3 May-June
Elaenia cristata: unsexed 11.5, 12.0
Myiopagis viridicata: (LA) unsexed 11.0, 11.6, 11.9, 12.3
Phaeomyias murina: unsexed 9.8, 10.4, 10.5, 11.3; (LA) unsexed 9.9
Campstostoma obsoletum: unsexed 6.9, 7.5, 7.5; (LA) unsexed 6.8
Tyranniscus vilissimus: (LA) unsexed 10.1
Leptopogon superciliaris: (LA) unsexed 12.0
Mionectes olivaceus: (LA) ♂ 13.8, unsexed 13.0
Notiochelidon cyanoleuca: (RG) 21 unsexed 8.5-10.8 ($9.7 \pm .59$)
Stelgidopteryx ruficollis: (LA) unsexed 15.0
**Hirundo rustica*: unsexed 16.9 November
Cyanocorax yncas: (RG) unsexed 89.0
Campylorhynchus griseus: unsexed 37.0, 38.5, 43.5, 43.6, 45.0, 46.5
Campylorhynchus nuchalis: 10 unsexed 21.1-25.5 (23.22 ± 1.60)
Thryothorus ludovicianus: (LA) unsexed 15.6, 16.3
Thryothorus leucotis: unsexed 14.0
Troglodytes aedon: unsexed 12.8; (LA) unsexed 12.0, 12.8
Mimus gilvus: 16 unsexed 52.5-66.0 (58.4 ± 4.55)
**Cathartes minimus*: unsexed 30.0, 30.5, November
Turdus leucomelas: unsexed 53.0, 60.0, 61.5
Turdus nudigenis: 21 unsexed 53.0-66.0 (58.47 ± 3.81)
Polioptila plumbea: ♀ 7.0
Cyclarhis gujanensis: unsexed 25.5, 27.0; (LA) unsexed 25.0, 26.6, 28.2
Hylophilus aurantiifrons: (LA) unsexed 9.3, 9.8, 10.5
Hylophilus flavipes: unsexed 11.5; (LA) unsexed 9.9, 10.5
Molothrus bonariensis: (LA) ♂ 53.0
Cacicus cela: 16 unsexed 51.2-91.0 (61.73 ± 11.96)
Quiscalus lugubris: ♀ 50.0
Icterus icterus: unsexed 56.5, 63.0, 84.0; (LA) unsexed 68.0
Icterus nigrogularis: unsexed 31.0, 33.3, 36.0, 37.0
Gymnomystax mexicanus: unsexed 93.0
**Vermivora peregrina*: (LA) unsexed 9.4 January
Dendroica petechia: unsexed 9.0, 9.3
**Seiurus noveboracensis*: unsexed 15.4; (LA) unsexed 15.9 November, October
Geothlypis aequinoctialis: (LA) ♀ 13.0
**Setophaga ruticilla*: (LA) ♀♀ 7.5, 8.5 January, November
Basileuterus culicivorus: (LA) unsexed 9.4
Conirostrum speciosum: ♀ 8.0
Coereba flaveola: 9 unsexed 8.8-10.5 ($9.39 \pm .55$); (LA) unsexed 7.9, 8.4, 8.6, 8.9, 9.4, 9.4, 9.5
Tangara arthus: (RG) unsexed 20.0
Tangara tayana: (LA) unsexed 19.1
Tangara cyanoptera: (LA) ♀ 18.0
Euphonia trinitatis: ♂ 11.5, ♀♀ 8.8, 11.5
Euphonia laniirostris: (LA) ♀ 13.5
Traupis episcopus: 10 unsexed 30.0-36.5 (32.78 ± 2.01); (LA) unsexed 29.5, 34.0
Traupis glaucocephala: 12 unsexed 31.3-37.3 (33.08 ± 2.38)
Ramphocelus carbo: (LA) ♀ 22.0
Tachyphonus rufus: (LA) ♂♂ 31.5, 32.0, 32.0, 32.1, ♀♀ 30.5, 32.0, 32.8, 33.5, 37.5
Rhodinicichla rosea: (LA) ♂♂ 43.0, 44.6

- Nemosia pileata*: ♂ 13.5
Cyanocompsa brissonii [= *cyanea*]: (LA) ♂♂ 20.0, 22.3, ♀♀ 18.9, 19.4, 22.5
Saltator coerulescens: 21 unsexed 49.0–67.0 (54.91 ± 5.01); (LA) unsexed 51.8, 53.0, 54.5
Saltator orenocensis: unsexed 34.5, 36.8
Saltator albicollis: (LA) unsexed 37.6
Paroaria gularis: unsexed 20.8, 21.4, 21.5, 21.8, 22.0, 23.0, 23.8
Coryphospingus pileatus: ♂♂ 13.8, 14.9, 15.0, 15.8, ♀♀ 14.3, 15.0
Arremonops conirostris: (LA) unsexed 24.6, 28.1, 29.0, 29.8, 31.5
Tiaris bicolor: (LA) ♀ 10.5
Oryzoborus crassirostris: ♀ 19.8
Sporophila intermedia: ♂♂ 11.2–13.5 (12.33 ± 8.1), ♀♀ 11.0, 11.3; (LA) ♂ 11.2
Sporophila nigriceps: (LA) ♂♂ 8.8, 8.9, 9.1, 9.5, 9.7, 10.0, ♀♀ 8.5, 9.5, 9.5, 10.0, 10.9, 11.25
Sporophila obscura: (LA) unsexed 11.4
Sporophila minuta: (LA) ♂♂ 8.0, 8.4
Volatinia jacarina: ♂♂ 8.0, 8.8, 9.4, 10.0, 10.0, 10.3, ♀ 8.8; (LA) ♂♂ 9.2, 9.8, 10.5,
 ♀♀ 9.0, 9.0
Sicalis flaveola: 21 unsexed 17.0–23.4 (19.72 ± 1.5); (LA) ♀ 19.3, unsexed 21.0
Ammodramus humeralis: unsexed 15.8
Carduelis psaltria: (LA) ♂ 10.8, ♀ 10.2

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Eleven bird species new to Bolivia

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Fieldwork conducted by the authors in the Departamento de La Paz, Bolivia, in 1981, produced specimens of 9 bird species not previously recorded from the country and 2 bird species previously known from Bolivia from sight